

WHAT IS CLAIMED IS:

1. An apparatus, comprising:

5 an information storage medium having an information storage surface;

structure which includes a head and can effect a transfer of information with respect to said surface, said structure being operable to effect relative movement of said head and said surface, said relative movement including first and second zones which are mutually exclusive, said structure being operable to effect relative movement of said head and said surface within said first zone while maintaining said head adjacent said surface and using said head to effect at least one of reading information from and writing information to said surface, and wherein said head is spaced from said surface when in said second zone; and

15 a head cleaning section which includes a cleaning part engageable with said head when said head is in said second zone, said structure being operable to effect relative movement of said head and said cleaning part while said head and said cleaning part are engaged, in a manner which includes a component of movement representative of an applied force subject to a damping influence.

20 2. An apparatus according to Claim 1, wherein said applied force includes a harmonic oscillation and said damping influence includes an overdamping of said harmonic oscillation.

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3. An apparatus according to Claim 1,
wherein said applied force and said damping
influence are each effective with an orientation
5 approximately parallel to a predetermined direction; and
wherein said relative movement of said head and said
cleaning part while said head and said cleaning part are
engaged includes a further component of movement
effective with an orientation approximately parallel to a
10 further direction which is transverse to said
predetermined direction.

4. An apparatus according to Claim 3, wherein one
of said components of movement involves a reciprocating
15 motion and the other thereof involves progressive motion
in one direction during said reciprocating motion.

5. An apparatus according to Claim 3, wherein said
further component of movement includes a reciprocating
20 motion of said head relative to said cleaning part.

6. An apparatus according to Claim 3, wherein said
applied force includes a harmonic oscillation, and said
damping influence includes an overdamping of said
25 harmonic oscillation.

7. An apparatus according to Claim 1, wherein said
head cleaning section includes a first portion which can
apply said applied force to said cleaning part in a
predetermined direction, and a second portion which
30 exerts said damping influence on said cleaning part
approximately parallel to said predetermined direction.

8. An apparatus according to Claim 7, wherein said first portion includes a resilient part which yieldably resists movement of said cleaning part away from a predetermined position in a direction approximately parallel to said predetermined direction.

9. An apparatus according to Claim 8, wherein said resilient part is a flexible part having said cleaning part supported thereon;

wherein said second portion includes a damping part which is physically coupled to said flexible part and damps flexing of said flexible part;

wherein said structure includes a movably supported member which has said head supported thereon;

wherein said structure is configured to effect movement said member so that said head moves within said second zone from a first position to a second position and then back to said first position; and

wherein in response to movement of said head by said member from said first position to said second position, said cleaning part is moved away from said predetermined position through flexing of said flexible part, and said cleaning part and said flexible part are free of influence from said head and said member as said head returns from said second position to said first position.

10. An apparatus according to Claim 9,
wherein said head cleaning section includes an
element mounted on said flexible part;

5 wherein as said member moves said head from said
first position to said second position said member
engages said element and moves said element in a manner
that flexes said flexible part and moves said cleaning
part away from said predetermined position; and

10 wherein as said member moves said head from said
second position to said first position said member is
free of engagement with said element.

11. An apparatus according to Claim 9, wherein said
15 movement of said head from said second position to said
first position includes, at a location between said first
and second positions, a reciprocal motion of said head in
directions approximately parallel to a direction of
movement thereof between said first and second positions.

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12. An apparatus according to Claim 8,
wherein said head cleaning section includes a
pivotally supported lever having said cleaning part
thereon;

5 wherein said resilient part is a spring which
yieldably urges said lever to pivot in a predetermined
direction;

 wherein said second portion includes a damping part
which is cooperable with said lever for yieldably
10 resisting pivotal movement thereof;

 wherein said structure includes a movably supported
member which has said head supported thereon;

 wherein said structure is configured to effect
movement said member so that said head moves within said
15 second zone from a first position to a second position
and then back to said first position; and

 wherein in response to movement of said head by said
member from said first position to said second position,
said cleaning part is moved away from said predetermined
20 position through pivotal movement of said lever against
the urging of said spring, and said cleaning part and
said spring are free of influence from said head and said
member as said head returns from said second position to
said first position.

13. An apparatus according to Claim 12, wherein said second portion includes a damping part which cooperates with said lever and with a stationary part, and which has alternating layers of a polyester material
5 and a pressure sensitive adhesive, said pressure sensitive adhesive yieldably resisting shear forces within said pressure sensitive adhesive so as to provide said damping influence.

10 14. An apparatus according to Claim 12,
wherein as said member moves said head from said first position to said second position said member engages said lever and pivots said lever against the urging of said spring; and

15 wherein as said member moves said head from said second position to said first position said member is free of engagement with said lever.

20 15. An apparatus according to Claim 12, wherein said movement of said head from said second position to said first position includes, at a location between said first and second positions, a reciprocal motion of said head in directions approximately parallel to a direction of movement thereof between said first and second
25 positions.

30 16. An apparatus according to Claim 1, wherein said cleaning part has a textured surface, and said engagement of said head and said cleaning part involves engagement of said head with said textured surface.

17. An apparatus according to Claim 16, wherein said cleaning part has a portion which is made of sol-gel and which has said textured surface thereon.

5 18. An apparatus according to Claim 16, wherein said cleaning part has a portion which is made of an epoxy material and which has said textured surface thereon.

10 19. An apparatus according to Claim 1,
 wherein said information storage medium includes a magnetic material which has said information storage surface thereon; and
 wherein said head is a magnetic read/write head.

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20. A method of operating an apparatus which includes an information storage medium having an information storage surface, structure which includes a head and can effect a transfer of information with respect to said surface, and a cleaning part, said method comprising:

effecting relative movement of said head and said surface, said relative movement including first and second zones which are mutually exclusive, said head being spaced from said surface when in said second zone;

maintaining said head adjacent said surface and using said head to effect at least one of reading information from and writing information to said surface during relative movement of said head and said surface within said first zone;

causing said cleaning part to engage said head when said head is in said second zone while effecting relative movement of said head and said cleaning part in a manner which includes a component of movement representative of an applied force subject to a damping influence.

21. A method according to Claim 20, including:

configuring said applied force to include a harmonic oscillation; and

configuring said damping influence to include an overdamping of said harmonic oscillation.

22. A method according to Claim 20, including:

orienting said applied force and said damping
influence to each be effective approximately parallel to
5 a predetermined direction; and

causing said relative movement of said head and said
cleaning part while said head and said cleaning part are
engaged to include a further component of movement
effective with an orientation approximately parallel to a
10 further direction which is transverse to said
predetermined direction.

23. A method according to Claim 22, including

configuring one of said components of movement to involve
15 a reciprocating motion, and configuring the other thereof
to involve progressive motion in one direction during
said reciprocating motion.

24. A method according to Claim 22, including

20 configuring said further component of movement to include
a reciprocating motion of said head relative to said
cleaning part.

25. A method according to Claim 22, including:

25 configuring said applied force to include a harmonic
oscillation; and

configuring said damping influence to include an
overdamping of said harmonic oscillation.

26. A method according to Claim 20, including
configuring said cleaning part to have a portion which is
made of sol-gel and which has thereon a textured surface,
5 said engagement of said head and said cleaning part
involving engagement of said head with said textured
surface.

27. A method according to Claim 20, including
10 configuring said cleaning part to have a portion which is
made of an epoxy material and which has thereon a
textured surface, said engagement of said head and said
cleaning part involving engagement of said head with said
textured surface.

15 28. A method according to Claim 20, including
configuring said information storage medium to include a
magnetic material which has said information storage
surface thereon, said head being a magnetic read/write
20 head.